Cottonwood Creek Confluence

Current Status:
April 2011, the park completed a *Fish Passage Feasibility Study* on the confluence area of Cottonwood Creek and the Clark Fork River. The study was prompted by mounting pressure from the Clark Fork Coalition and State FWP to spend construction dollars to improve the confluence area in support of sport fisheries. The study explores engineering alternatives for overcoming the Kohrs-Manning Ditch as an obstacle to fish passage on the creek. The study does not select a preferred action, but lays out NPS policy, reviews park documents for relevant direction managing the National Historic Landmark (NHL), and rates current technology and solutions. The confluence is within the park boundary and part of the river to be remediated and restored through upcoming CERCLA/Superfund plans.

Background:
The park identified a goal for stream restoration on Cottonwood Creek as early as 2001 to improve endangered native populations, namely West Slope Cutthroat Trout. With Superfund resolution in 2008, pressure from State and sport fishing groups has increased to improve the confluence area of this primary, high flowing tributary to the Clark Fork River, mostly for sport species i.e. Brown and Rainbow trout. Cottonwood Creek enters the park on its SE corner and flows entirely within the park for 1 mile to the river.

The Kohrs-Manning Ditch crosses the Creek, 1/10th of a mile upstream from the confluence and was built in1868 to convey irrigation water in the form of senior water rights from the river, and junior overflow rights from the creek, to/through the ranch and offsite to 3 other users. As the study explains, the Ditch system is on the National Register and *'preservation'* of the system is the legally defined management direction. Engineering solutions do not yet exist that meet the critical tests of delivering the water rights, not altering historic fabric, and allowing late summer fish migration to reach the river.

During annual high water, the K-M ditch, seen mostly underwater in this photo, does not impede connection between Cottonwood Creek, (flowing towards the date stamp) and the Clark Fork River. Fish heading upstream to spawn are able to do so. However, at lower water, it entrains juvenile fish returning to the river in late summer and prevents fall spawning species access upstream.

Complicating the issue, a pure native West Slope Cutthroat trout population exists upstream, off park. If the park opens up the confluence, this population may be impaired by more aggressive Browns, contradicting NPS policy to support native fisheries. A no action preferred alternative has been suggested by WASO scientists as a result.

State FWP has targeted Cottonwood Creek for restoration and rated it as a second tier (of four) high priority stream in its 2011 Tributaries Prioritization Plan, a blue print for work actions and funding priorities. While FWP revised the document to show support for native fisheries, NPS biologists remain convinced that the State's desire to mingle non-native and native species will destroy the native species, advising against unrestricted connectivity.

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